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First Occurrence of *Euphysora gemmifera* (Cnidaria, Hydrozoa, Corymorphidae) in Japan

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Abstract. A rare anthomedusa, *Euphysora gemmifera* Bouillon, 1978, is redescribed and illustrated, based on one immature medusa with medusa buds collected from Tanabe Bay in the Pacific Coast of Japan in 2001 as the first record in Japanese waters and the second record in the world. Four white spots on the manubrium of the present specimen is a new character state of *E. gemmifera*.

Key words: *Euphysora gemmifera*, white spots on the manubrium, medusa bud, Tanabe Bay, Pacific Ocean, anthomedusa, rare species.

Introduction

Euphysora Maas, 1905 of the family Corymorphidae (Anthomedusae, Hydrozoa, Cnidaria) includes 20 medusan species (Huang, 1999; Bouillon and Boero, 2000; Xu and Huang, 2003) and each species possesses usually only one long principal tentacle, but sometimes three additional short or rudimentary tentacles are produced. *Euphysora* medusae are distributed worldwide, and many were described from warm and shallow waters (Kramp, 1961). In Japanese waters, only *E. bigelowi* Maas, 1905 has been recorded and it is a common species in the southeastern coast (Kubota, 1997, 2003a, b). The hydroid stage of *E. bigelowi* has been known both in the laboratory and in the field (Sassaman and Rees, 1978; Kubota and Iwao, 2002).

Euphysora gemmifera Bouillon, 1978 was described only once from Laing Island, Papua New

Guinea based on several medusae (Bouillon, 1978) and reported as a sole *Euphysora* medusa with medusa buds on the bell margin (Xu and Huang, 2003). Recently, though only one specimen was found, an *E. gemmifera* medusa was obtained from the Pacific Coast of Japan through 350 catches with a plankton net from August 2001 to September 2002. Before and after this occasion, no other specimen has been collected in Tanabe Bay and its adjacent waters (Kubota, 2003b; Kawamura and Kubota, unpublished data). We redescribe this rare species in the present paper, stressing an undescribed character.

Euphysora gemmifera Bouillon, 1978
(Fig. 1)

Euphysora gemmifera Bouillon, 1978: 263, fig. 9.

Material examined. A single immature specimen, collected by M. Kawamura, through a vertical tow from 2 m above the bottom (27 m in depth) with an NGG54 plankton net (diameter: 0.56 m, mesh size: 0.334 mm) at the mouth of Tanabe Bay (135°21'E, 35°42'N), Wakayama Prefecture, Japan, on October

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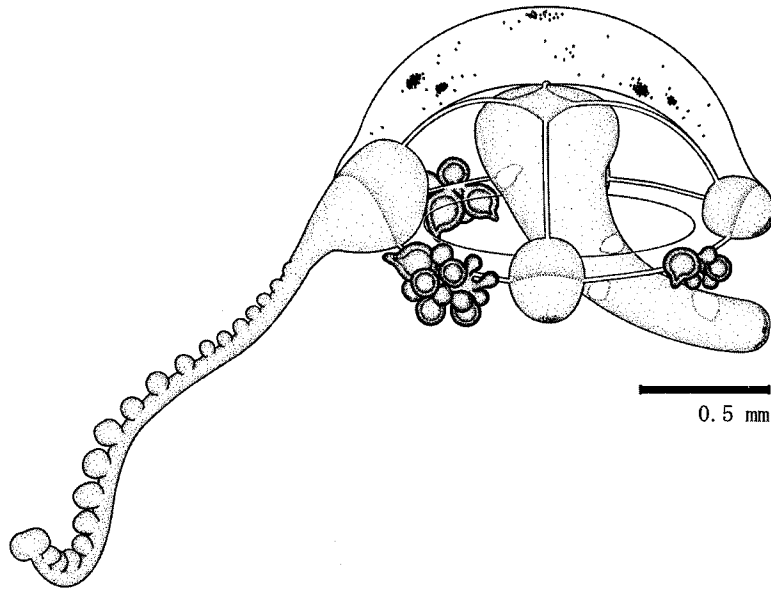


Fig. 1. Immature medusa of *Euphysora gemmifera* with medusa buds from Tanabe Bay, Pacific coast of Japan, lateral view. Note presence of white spots on the manubrium.

22nd, 2001. This specimen was fixed in buffered 5% formalin-seawater within a day after collection and preserved in the same solution. Drawing was made of the living and preserved specimen using a camera lucida.

Description. Bell 0.8 mm in height, 1.3 mm in width, and dome-shape. There is no distinct structure on the bell except for patchy cnidae on the exumbrella. Among four spherical marginal bulbs without ocellus, the largest bulb bears a long tentacle with 19 abaxial clusters of cnida. The ring canal and the four radial canals are straight and simple. The manubrium is cylindrical and long with four white spots of unknown nature; the mouth is circular without oral tentacles. The distal end of the manubrium and the marginal bulbs are pinkish red in color. Neither peduncle nor gonads were developed. Clusters of medusa buds were produced at adradial of the bell margin. The numbers of medusa buds per cluster are 5, 10, and 14.

Geographical distribution. Papua New Guinea (Bouillon, 1978), Japan (present study). Only the type material collected by Bouillon (1978) has been

recorded, and this is the second record of *E. gemmifera* and also represents the first occurrence of this species in Japanese waters.

Remarks. Among 20 congeneric species, only *E. gemmifera* has been described to bear the characteristic production of medusa buds on the bell margin of immature medusa. The single specimen examined in this study is also immature, and all the morphological features coincided precisely with those of the original description of *E. gemmifera*, excluding possession of four white spots on the manubrium of the present specimen. The adult medusa of this species still remains unknown, but the immature medusa of *E. bigelowi*, another medusa distributed in Japan (Kubota, 2003a, b), does not bear medusa buds and develops three short tentacles later (Kubota and Iwao, 2002).

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